MEMORANDUM

To: George Rhodes

From: Angela C. Whitehead

Subject: **Northern Fauquier Sports Complex**
WEG Project #1629

Date: December 5, 2002

cc:

The following summarizes the results of a wetland creation feasibility study conducted on the Northern Fauquier Sports Complex in Fauquier, County, Virginia on November 13, 2002. Detailed soil profile descriptions are included with this correspondence. Parameters discussed in this correspondence include soil types, site hydrology, site topography, existing vegetation, existing wetlands, and other related site limitations.

According to the Soil Survey of Fauquier County, Virginia the Swampoodle Variant and Mongle Variant map units dominate the areas of investigation. The Mongle series is classified as a hydric soil in Virginia. Soils of the Mongle series are very deep, and somewhat poorly drained, with very slow runoff potential and moderate permeability. Soils of the Swampoodle series are very deep and moderately well drained, with medium to slow runoff and slow permeability. Observations in the field confirm soil properties described in the soil survey, and are presented in the soil profile descriptions. The indicators of a seasonal high water table were observed in all borings within 12 to 18 inches of the soil surface. A heavy clay layer would allow for perching, but should be overlain with amended topsoil to minimize shrink-swell activity and to provide a suitable rooting media for plant growth.

The soil borings represent the two different areas of investigation throughout the property. The feasibility of each area will be discussed below.

The grassy area adjacent to the existing pond was evaluated for the potential of wetland creation. Soil types and topography are both favorable within this area. The soils naturally exhibit a prolonged high water table and are classified as hydric soils. Wetland creation would be feasible with minimal grading designed to capture and retain surface runoff, while utilizing the existing seasonal high water table to create approximately 0.9 acres. While working in this area, WEG documented a small plot of planted woody stems. WEG should coordinate with the county to determine the purpose of this area (habitat area, civic group project, etc). This area presents fewer limitations than the area adjacent to the existing swale.

The soil and topography conditions are similar within the grassy area adjacent to the existing swale. Presently, this area is proposed for use as a “Frisbee golf” recreation area. Additionally,

the proposed access road and trail system may encroach on the potential wetland area. Minor grading designed to capture and retain runoff, while intercepting the seasonal high water table would create approximately 0.73 acres in this area.

Soil samples were collected and analyzed for nutrient availability as an additional component to the site investigation. Areas were sampled to provide a preliminary assessment of fertilization requirements. Further, more specific sampling is recommended following grading activities. Once the athletic fields are graded, individual samples should be collected within each field to more accurately determine the fertilization needs of each field and can be correlated to site conditions (i.e. compaction, soil type, drainage) and turf type (warm season vs. cool season). Based on preliminary testing results, the existing topsoil would require the following:

Requirements	**Lime**	**N**	**P_2O_5**	**K_2O**
lbs./1000 ft^2				
NFSC topsoil	15	3.0-4.0	4.5	5.0

Fertilizer Application	**Lime**	**Urea (N) 46-0-0**	**Triple Superphosphate (P) 0-48-0**	**Potash (K) 0-0-50**
lbs./1000 ft^2				
NFSC topsoil	15	8 (split application)	10	10